



FIG. 1

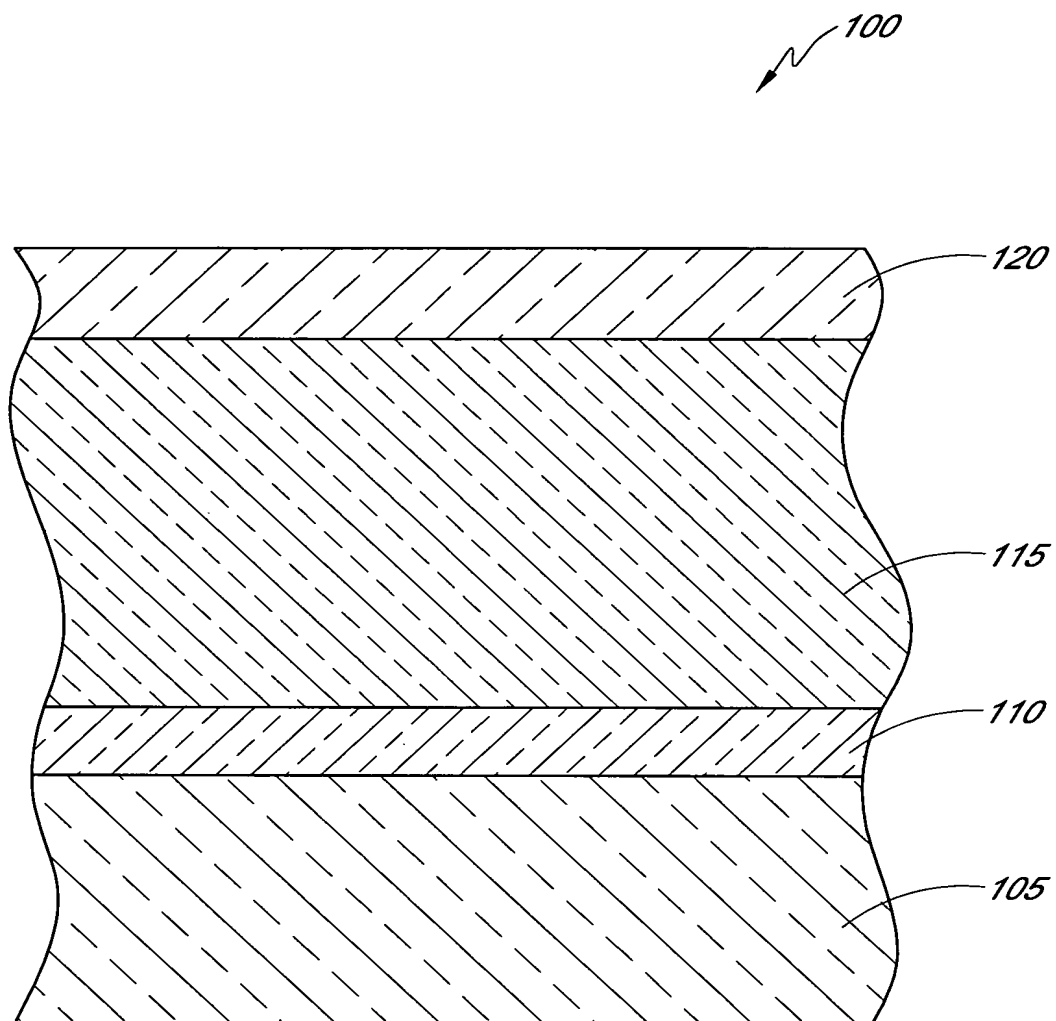


FIG. 2

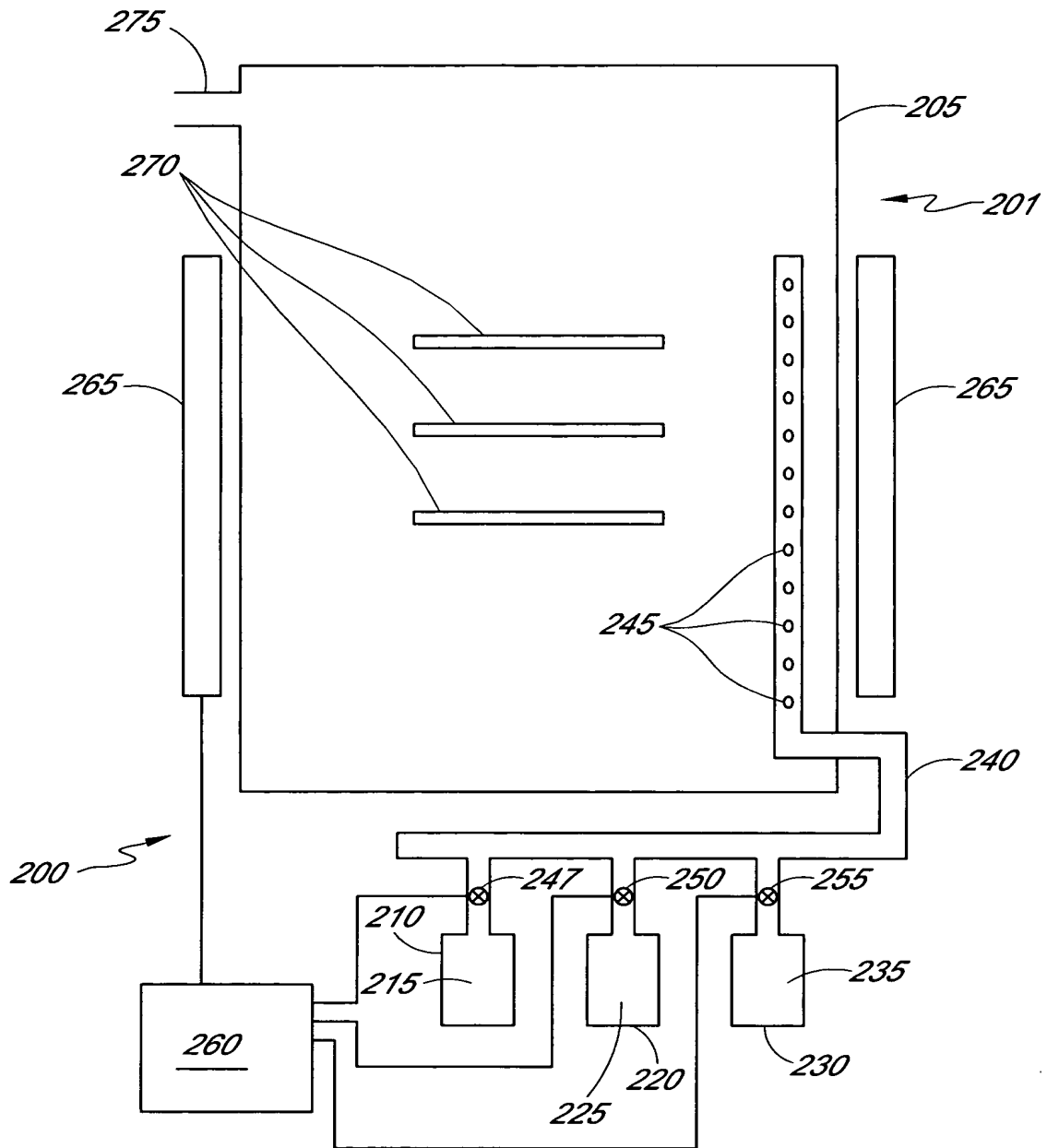


FIG. 3

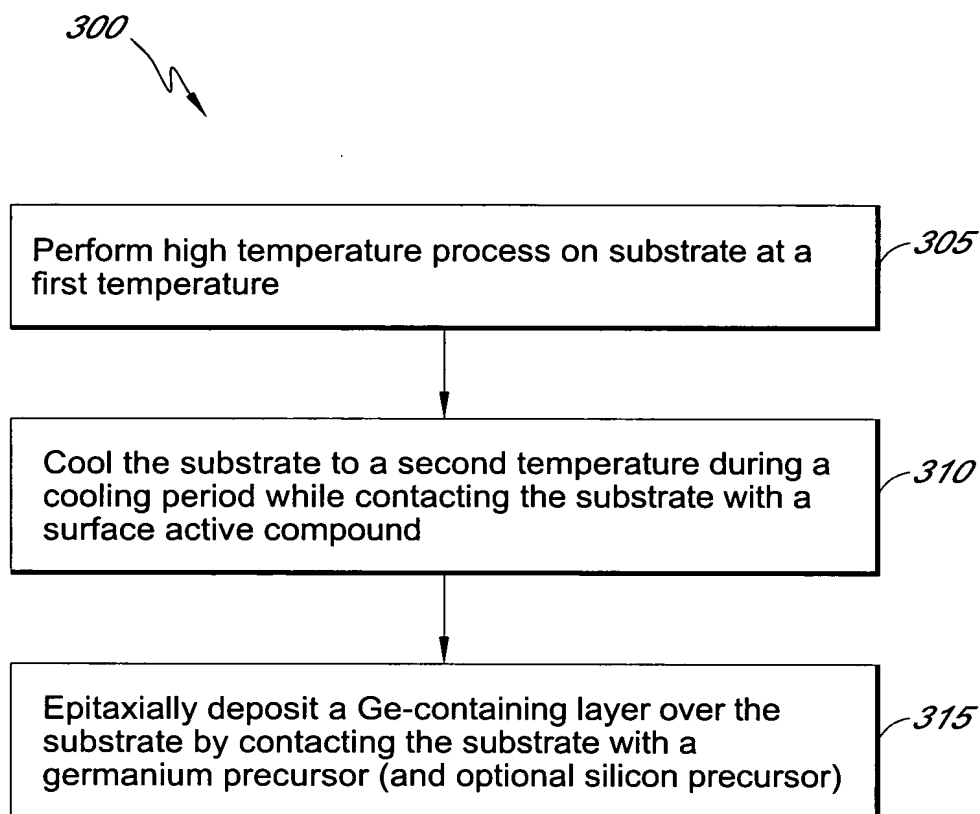


FIG. 4

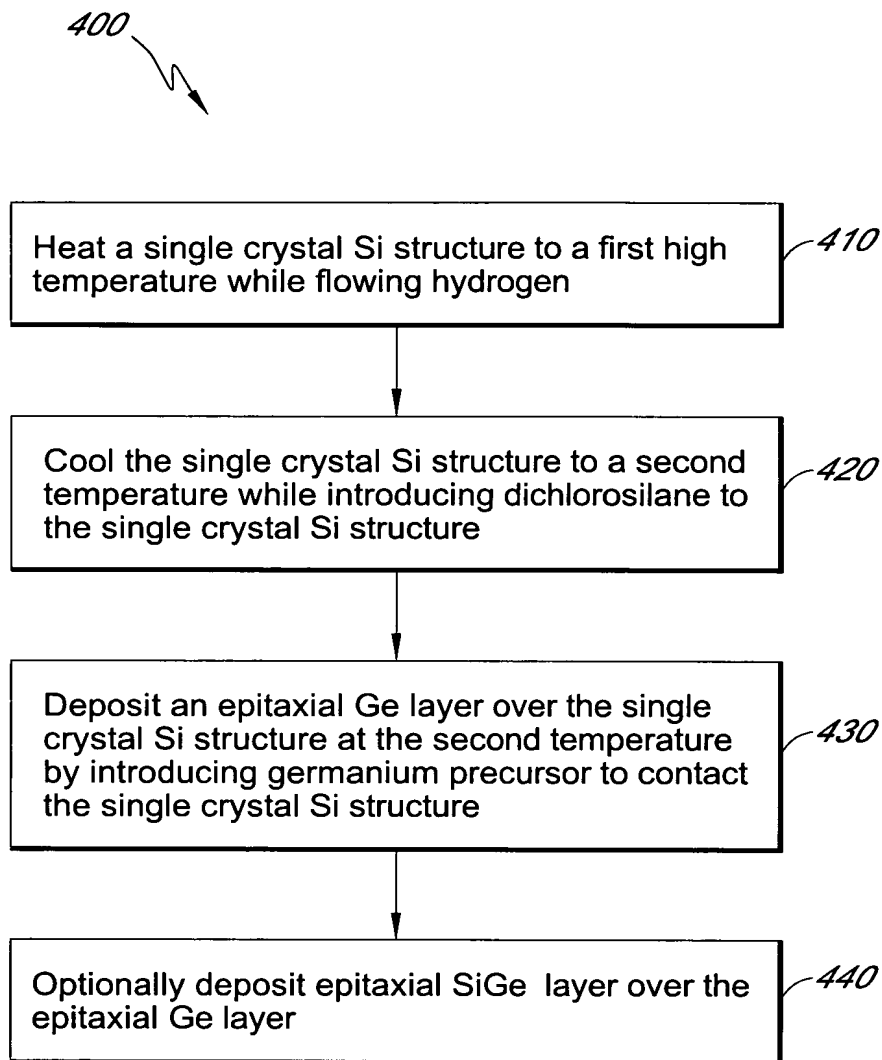


FIG. 5

50nm Ge at 350C + 1um Ge at 650C

P20-5753

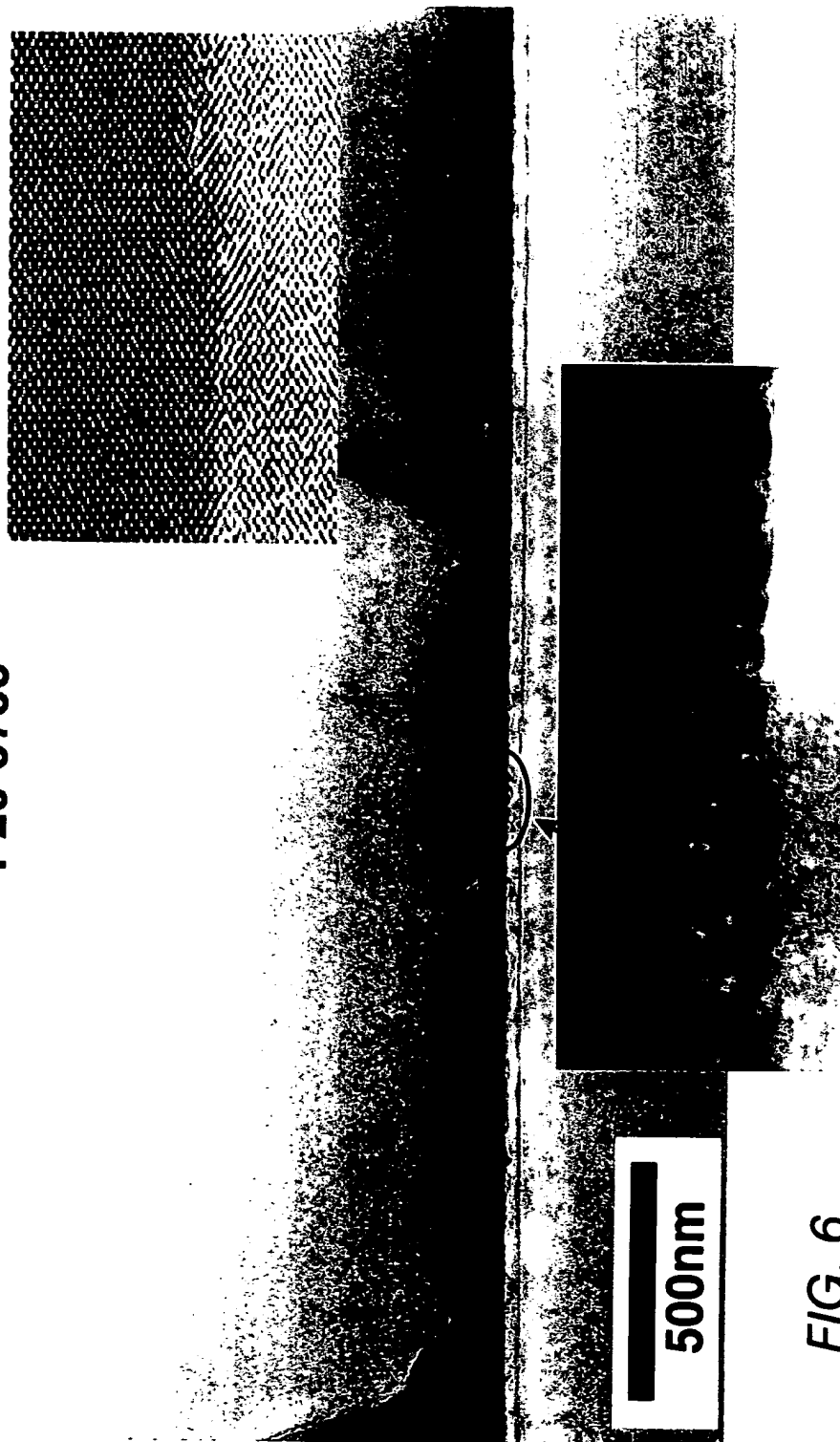


FIG. 6

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75 nm 100% Ge seed layer at 350C

P20-5763

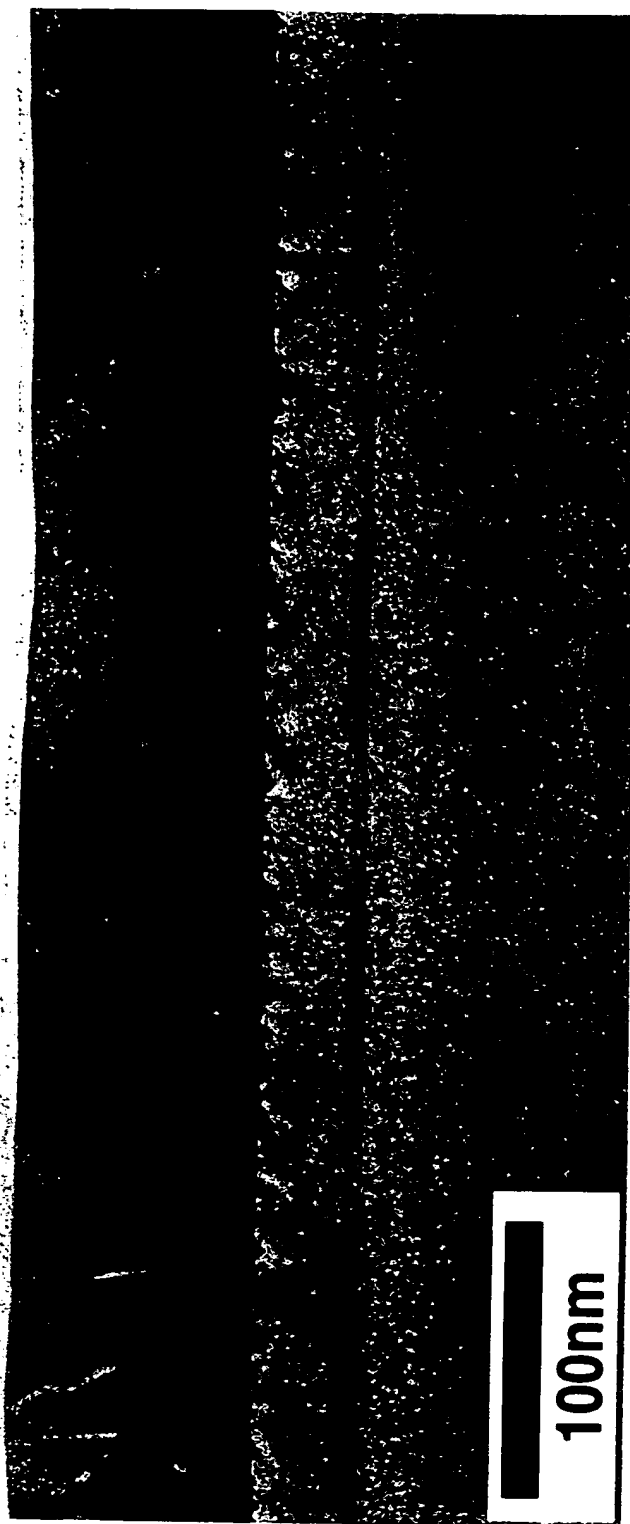


FIG. 7

Germanium EPD

- 35 ml AcOH
- 10 ml HNO_3
- 5ml HF
- 8 mg I_2

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APL 75(99)2909

- Mag x 1000
- $108 \times 82 \text{ um}^2$
- EPD $\sim 10^7 \text{ cm}^{-2}$

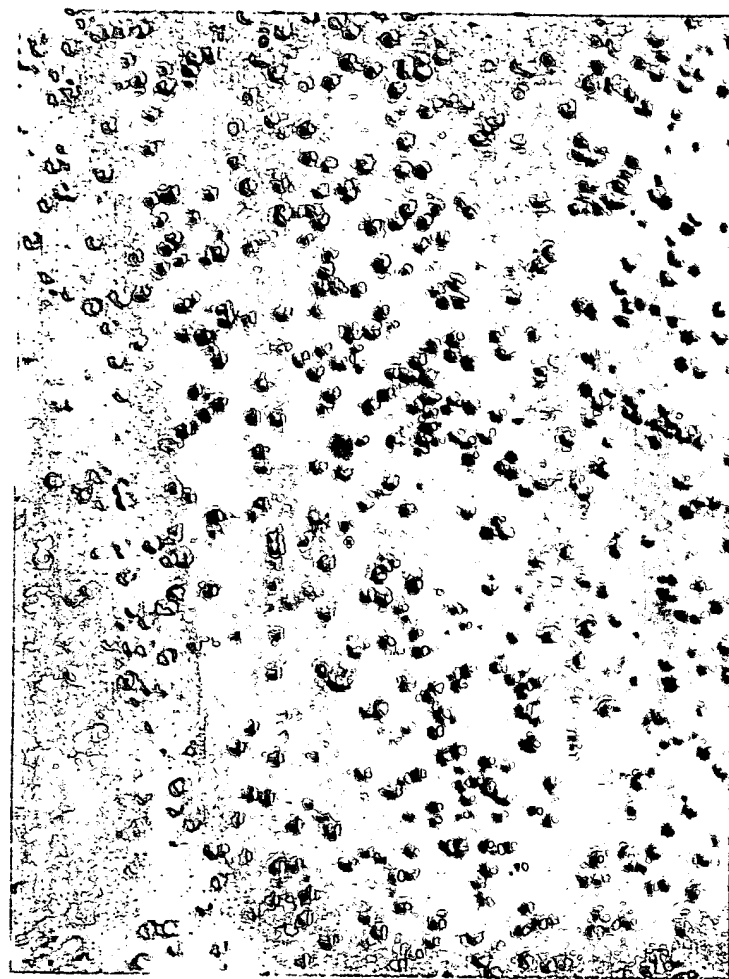


FIG. 8

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As-doped germanium
3 sccm arsine (1% in H₂)
mag. 200x
resistivity 19.65 mΩ•cm

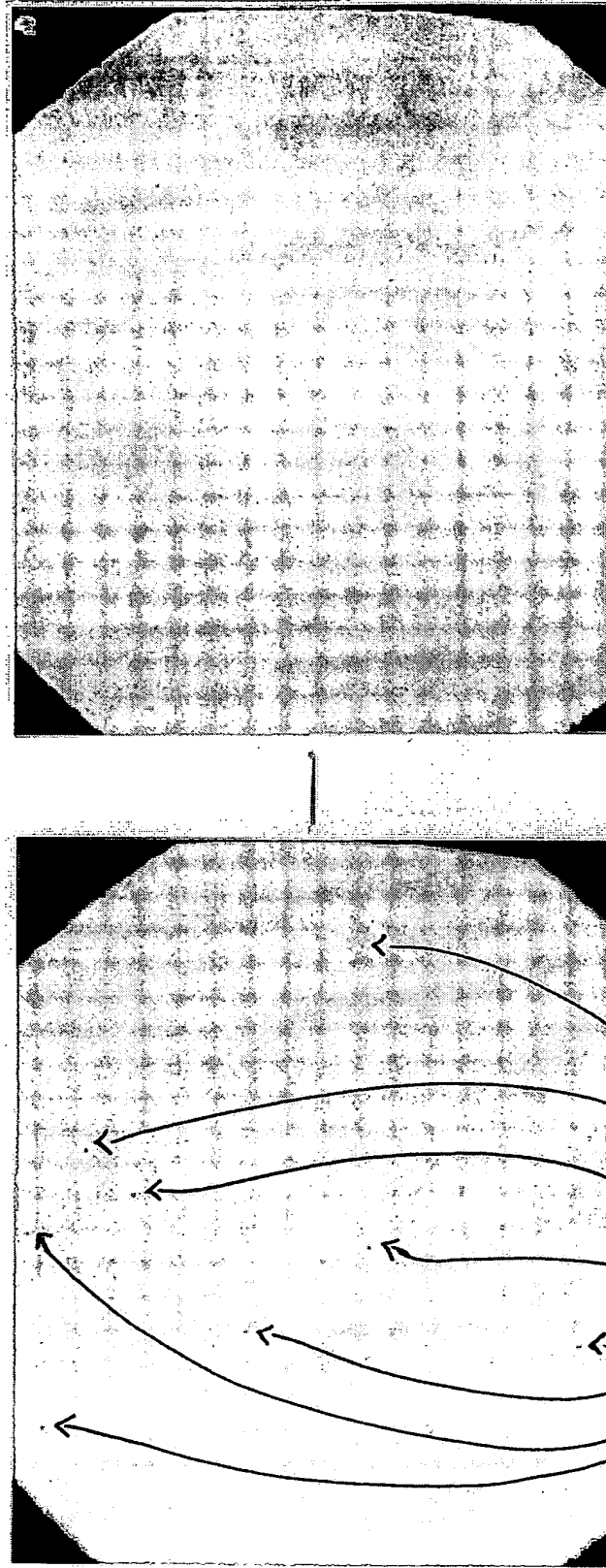


FIG. 9

As-doped germanium

10 sccm arsine (1% in H_2)

mag. 200x

resistivity 19.65 m Ω •cm

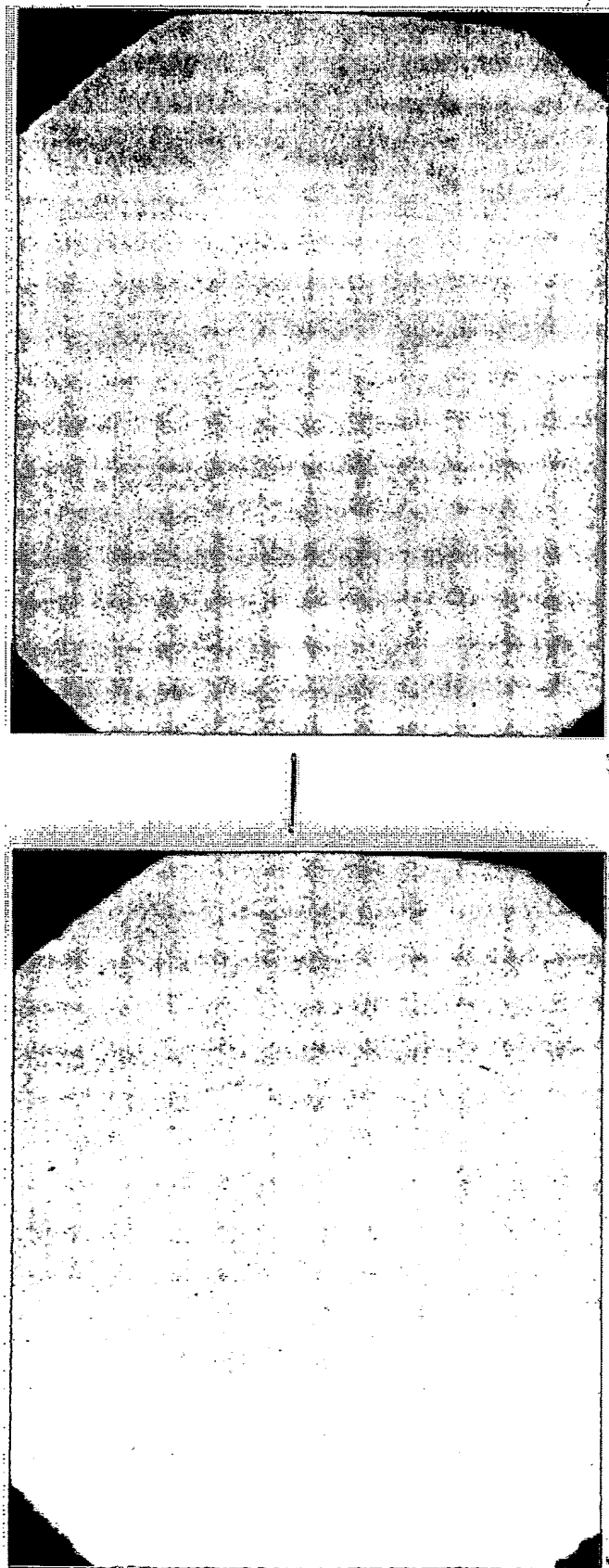


FIG. 10

As-doped germanium

30 sccm arsine (1% in H_2)

mag. 100x

resistivity $9\text{ m}\Omega\cdot\text{cm}$

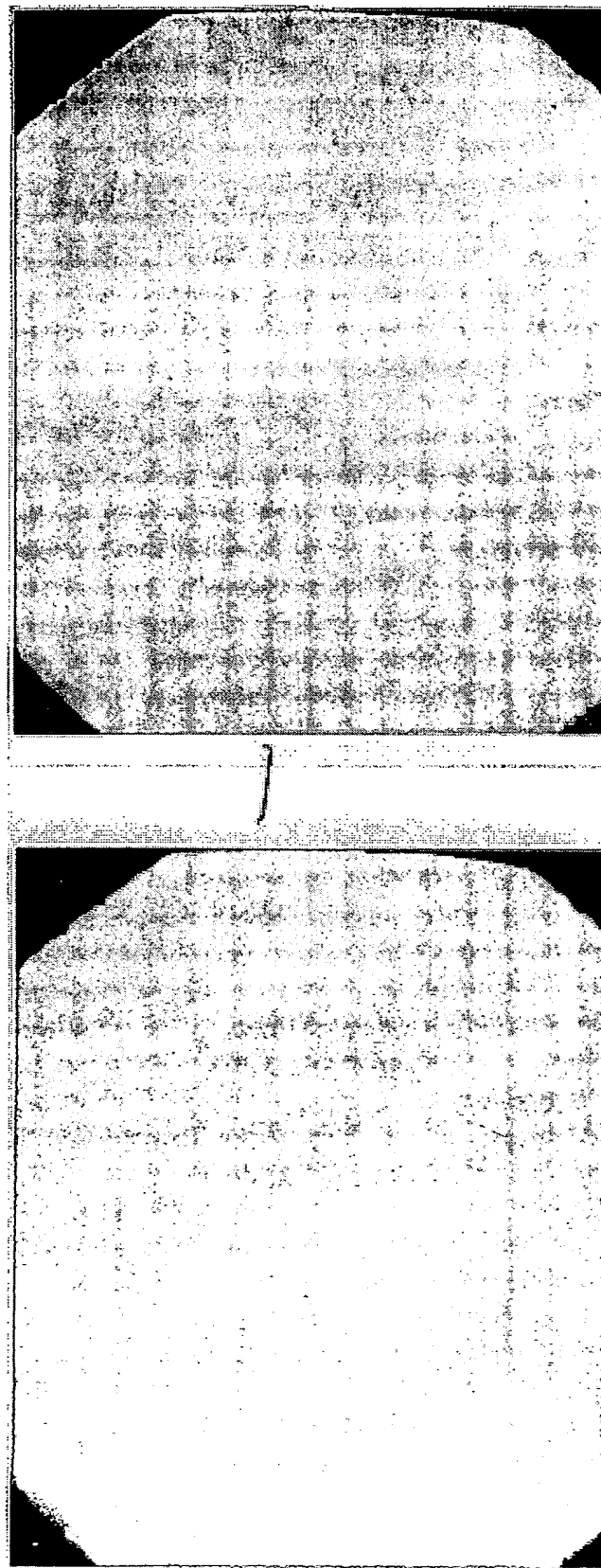


FIG. 11

P-doped germanium

1 sccm phosphine (1% in H_2)

mag. 200x

resistivity $1.27\ m\Omega\cdot cm$

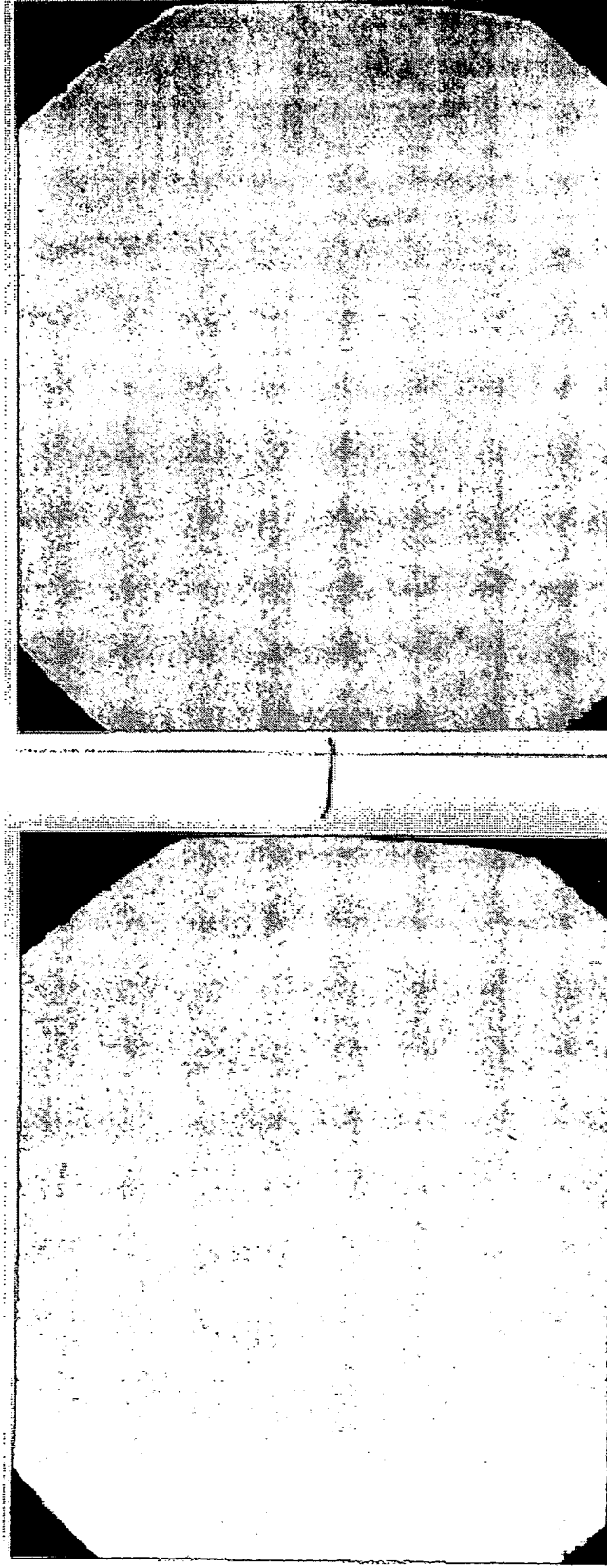


FIG. 12

Intrinsic germanium

mag. 100x

resistivity 0.1 $\Omega \cdot \text{cm}$

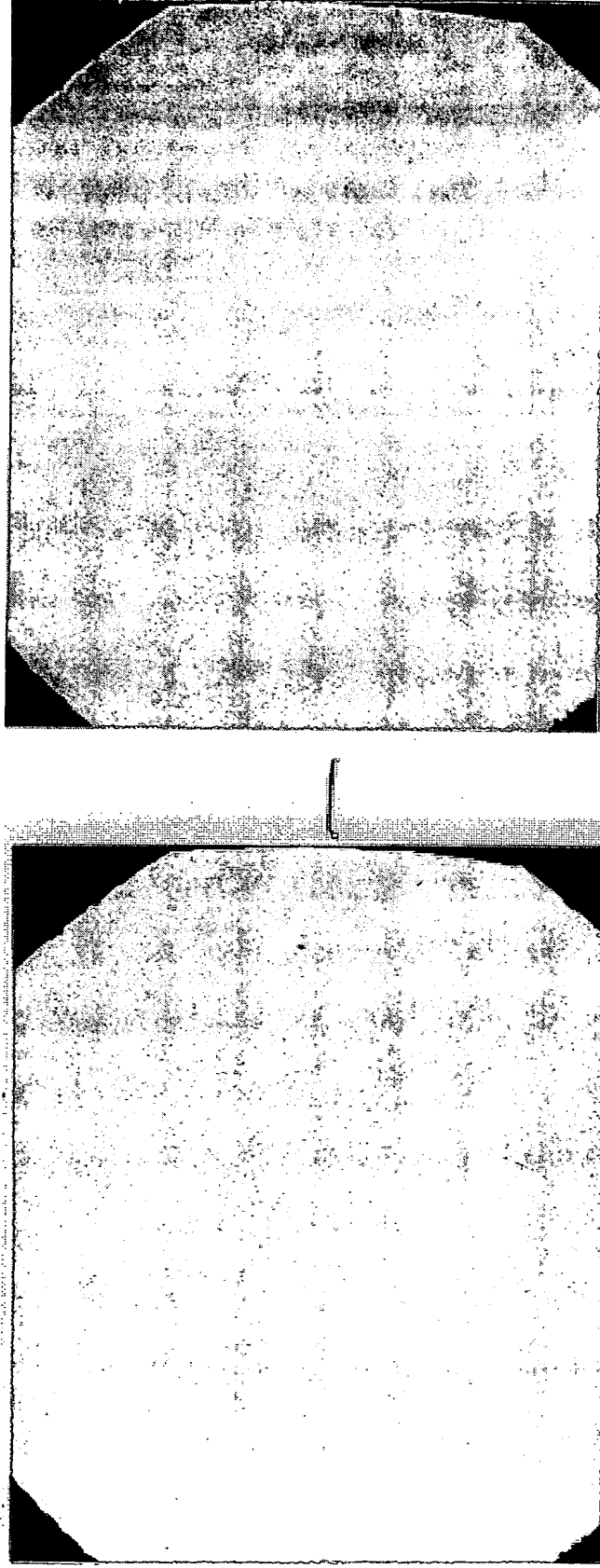
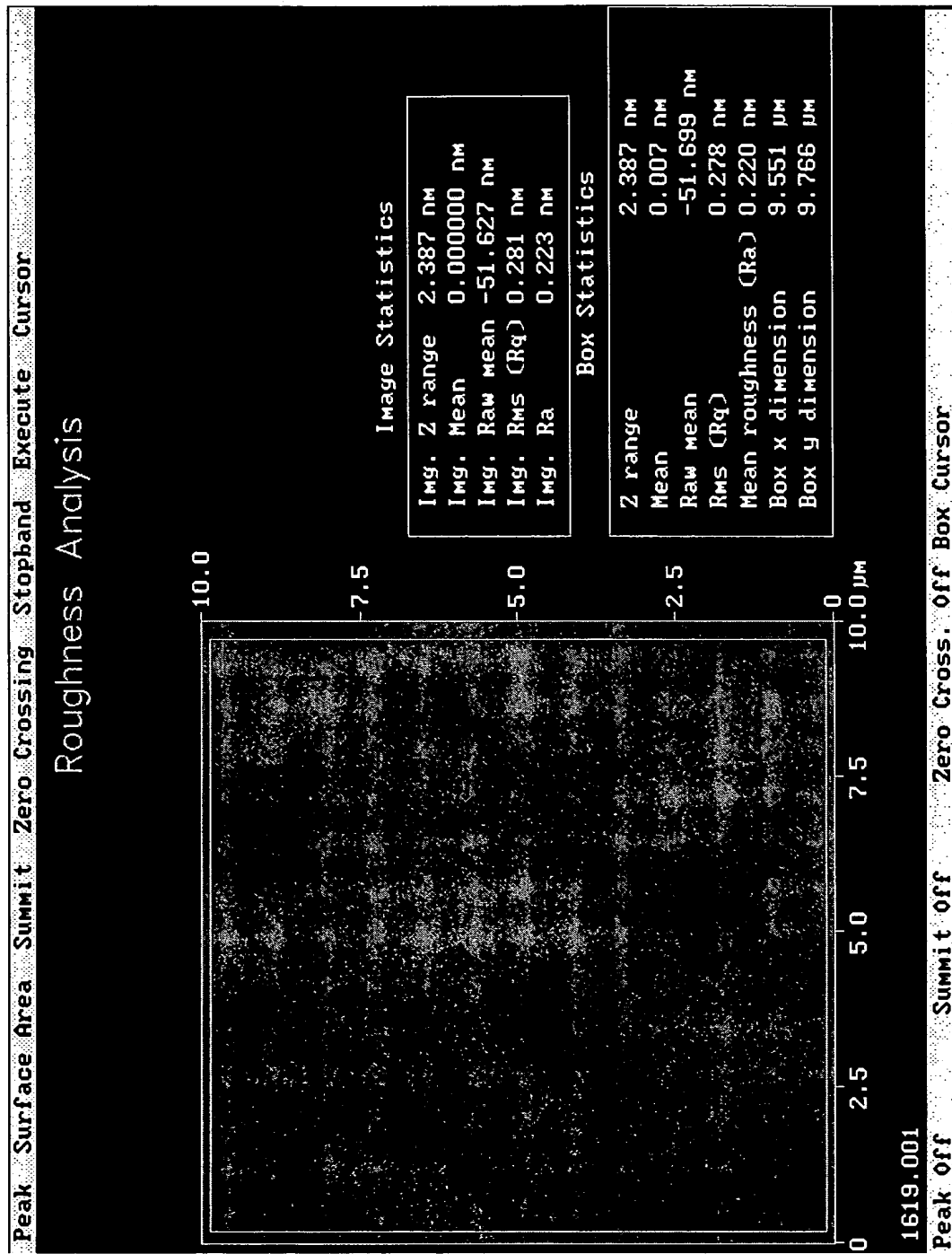


FIG. 13

FIG. 14

P-doped germanium

1 sccm phosphine (1% in H₂)



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